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WHITE PAPER

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Visualizing Spatial Experience in the Holocaust

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## White Paper: Visualizing Spatial Experience in the Holocaust

*Visualizing Spatial Experience in the Holocaust* was an exploratory project that sought to develop new ways to discover, study, and represent Holocaust victims' spatial experiences. What are spatial experiences? In normal, everyday life, almost everything we do or think has a spatial dimension. The living spaces of our house or apartment are intimate, familiar, secure. When we leave home for school or work, we have the sense of entering a larger world. Cities may feel crowded and rushed or stimulating and dramatic. Farm country may make one person feel peace, another boredom. The qualities and associations of the spaces we inhabit and through which we move affect our thoughts and feelings in countless ways. The structures and environments around us also influence our sense of self and relationships to other people.

While many aspects of the Holocaust have been studied extensively, the spaces and places of that cataclysmic event have only recently become objects of study. The members of the Holocaust Geographies Collaborative, many of whom were involved in this grant, have been working for more than a decade to understand the role of space and place in the history, geography, ideas, and personal experiences of those involved in the Holocaust. One of the most challenging problems our group has faced is how to bridge the gap between the well-documented history of the Nazis and other perpetrators of war crimes against civilians, including genocide, and the more subjective, individual, traumatic experiences of their victims. The places created by the Nazi regime are well known – think of Buchenwald, Auschwitz, and Treblinka, and the ghettos large and small in which Eastern European Jews were confined – but we know surprisingly little about how many kinds of such places existed, how they differed, and how their material characteristics and spaces shaped their inhabitants' lives, fears, perceptions, and possibilities for survival.

In this NEH-funded project, researchers from the Holocaust Geographies Collaborative turned from mapping perpetrator spaces to engage deeply with oral history interviews with Holocaust survivors. We hoped to find traces of how people responded when the meanings of the spaces around them changed, often in sudden, violent transformations caused by invasion, war, arrest, confinement, terror, transport, or forced labor. Most of our work in the project was preparation for analysis that we will be carrying out in coming months. We first had to acquire nearly 1,800 transcripts of survivor interviews and process them to be fully machine-readable (a process called tagging), then learn and practice new methods of analysis and visualization from corpus and computational linguistics in order to study the interviews now grouped into “corpora,” bodies of text. These methods would enable us to study hundreds, even thousands of transcripts of survivor interviews. While listening closely to individual interviews is very valuable, we wanted to know whether more distant computer methods of textual analysis could help us find words and phrases that signified spatial experiences, and then help us study experiences across a large number of survivors. We were also very curious to see whether different groups expressed their experiences of particular places in distinctive ways. For example, did people speak of camps differently than ghettos? Did women remember their experiences in labor camps differently than men? Comparative analysis has been rare in Holocaust Studies. We hoped that this project would enable us to carry out a series of comparative studies of key groups and kinds of places in the Holocaust.

Our original goals were to develop:

1. A new, hybrid methodology that combines close listening with manual and computer visualization, corpus linguistics (CL), and natural language processing (NLP).
2. A specific suite of open-source software modules and a prototype dictionary of spatial and relational terms that we will use for further analysis of survivor interviews.
3. Three articles submitted to top academic journals summarizing our methodology and empirical findings.
4. Research presentations at four major academic conferences and elsewhere.

We engaged in all of these activities throughout the project period, though unexpected delays and opportunities produced somewhat different results than we had originally projected in our proposal.

The first significant change to our original plan was our receipt of unexpected financial support for the project. The biggest influx of support came from the USC Shoah Foundation, which sees our work as part of their efforts to promote digital scholarship on the Holocaust. Project advisor Wolf Gruner, Director of the Center for Advanced Genocide Studies at the Shoah Foundation, was instrumental in securing this support. The Shoah Foundation covered travel expenses to all of our team members' meetings at USC, including a specialist conference on Digital Approaches to the Holocaust that our work help inspire. Our home institutions also provided support for travel. For these reasons, and another windfall noted below, we saved more than \$11,000 from the grant, even as we repurposed some of the grant monies for additional meetings and research travel. The savings also helped us more deeply involve three graduate students in the project, Maël Le Noc (Texas State), Justus Hillebrand (University of Maine), and Alexander Reinhold (Lancaster University).

A second set of changes were related to the transcripts of video interviews that constituted our primary historical evidence for studying the spatial experiences of Holocaust victims. It happened that our project was funded in the midst of protracted negotiations between the Shoah Foundation and ProQuest to transcribe all 54,000 video interviews in the Foundation's Visual History Archive (VHA). (We were among the experts the VHA consulted at this stage, to help develop protocols for tagging terms, gestures, and silence in the interviews.) Delayed implementation of the transcription project meant that we did not receive VHA transcripts until February 2018. This is why we requested a no-cost extension through March 2018. The unexpected boon was that, instead of receiving 50 English-language VHA transcripts, we received 984 – for free. This alone saved about \$8,500 from our proposed budget.

The delay also prompted PI Anne Kelly Knowles to seek transcripts from the United States Holocaust Memorial Museum (USHMM). With support from the University of Maine, Knowles employed two undergraduate research assistants to download more than 800 English-language transcripts from the USHMM online collection.

Thus our working set of transcripts now totals nearly 1,800 interviews. This gives us a far richer body of evidence than we had planned, enough material to use beyond prototyping – to use in analysis and interpretation. The delay also had the unintended benefit of enabling us to work with Alexander Reinhold, a PhD student in GeoHumanities and Computer Science at Lancaster University. Alex's PhD research (supervised by our team members Paul Rayson and

Ian Gregory) is developing models for deep maps, one of which will be based on our set of interview transcripts and other data from the Holocaust Geographies Project. By reallocating some of our NEH funds, we were able to employ Alex's advanced computing skills from December 2017, when we received the USHMM transcripts, through March 2018 to prepare the interview transcripts for linguistic analysis (a set of procedures called pre-processing). This turned out to be more complex than we had expected, in part because of all of the tags applied to the VHA transcripts. Alex's skills also enabled us to add a very important element to the project: a draft gazetteer of the Holocaust based on all geographical terms in the VHA index (yet another unanticipated gift from the Shoah Foundation) in addition to GeoNames and other authoritative sources. This means that Alex's geoparsing of the 1,800 interview transcripts is likely to be far more accurate and complete than geoparsing would have been using only GeoNames or other non-Holocaust-specific gazetteers.

### *Planning meetings*

The research team met in person six times during the grant period:

- At the USC Shoah Foundation, the four principals (Anne Kelly Knowles, Tim Cole, Alberto Giordano, and Paul Jaskot) met with VHA staff, developed our conceptual approach to analyzing testimony, and selected ten sample VHA interviews for analysis.
- At Lancaster University (UK), we attended an intensive Summer School in Corpus Linguistics for the Humanities, where we learned the basic methods of corpus and computational linguistics. After the training, we met with our Lancaster team members, Paul Rayson and Ian Gregory, to plan the research methodology to apply corpus linguistic and natural language processing to Holocaust survivor interview transcripts.
- At the bi-annual Lessons & Legacies Holocaust conference, we presented our first findings to an audience of experts. Then at USC, virtually the entire team met with Gruner and staff of the Visual History Archive to discuss how and when we would receive VHA transcripts.
- In Corvallis, Oregon, Knowles and team member Erik Steiner met to discuss visualization strategies.
- In Bristol and London, UK, the four principals participated in a specialist conference on Holocaust Studies after the Spatial Turn, sponsored by the Centre for Holocaust and Genocide Studies, Bristol University, and the Holocaust Research Centre, Royal Holloway, University of London. This was followed by a writing retreat in Bristol during which we drafted a paper for the 2019 volume of *Lessons & Legacies* and planned a number of grant proposals, including three that were submitted during the grant period (see Continuation of the Project, below).
- Digital Approaches to Genocide Studies, USC Center for Advanced Genocide Research. This specialist conference brought together scholars from around the world who are using advanced digital methods to study genocide. Work by the Holocaust Geographies Collaborative was prominently featured throughout the conference. Afterward, we held a final planning meeting.

### *Other travel*

PI Knowles traveled to Lithuania and Latvia in March 2017 to do field work and to attend an international meeting in Vilnius, “As Mass Murder Began: Identifying and Remembering the Killing Sites of Summer-Fall 1941,” sponsored by the International Holocaust Remembrance Alliance (IHRA) and the Vilna Gaon State Jewish Museum. Although this trip did not draw on NEH funds, it directly benefited the project by expanding Knowles’s network of Eastern European scholarly contacts and deepening her understanding of the traumatic events and places recorded in survivor interviews.

### *Training*

The Lancaster Summer School in Corpus Linguistics for the Humanities in July 2016 effectively launched this project. We continue to work with the tools we learned there, and the Lancaster contingent of our team, Rayson (computer science) and Gregory (GIS and geoparsing), continue to provide essential technical support.

Training graduate students has become a bigger part of the project than we expected. Knowles worked closely with Alex Reinhard throughout his pre-processing of the transcripts, helping him understand the historical context and complications of our source material. She has introduced Justus Hillebrand to the Lancaster tools, and will be working with him and UMaine masters student Abigail Belisle Haley to analyze transcripts in summer and fall 2018.

### **Accomplishments**

*Goal 1: Methodology.* Generally, our work under the grant has demonstrated the viability and potential value of combining close listening and reading of survivor video interviews with distant methods from the CL and NLP tools we learned at Lancaster University, namely AntConc and Wmatrix. These tools are well suited to iterative research, in which researchers move back and forth between query-based searches, general patterns, and specific instances in one or more particular texts. AntConc and Wmatrix also include visualization methods such as word clouds and concordance plots, both of which have already proven extremely useful in helping us search across many testimonies to find those most likely to be valuable in detailed analysis. We will write a full description of our iterative method in a journal article for either a Holocaust or GIS journal later this year. We are excited to realize that corpus analysis of Holocaust survivor interviews corresponds in scale to the continental scale of the Holocaust, sub-corpora to the regional scale, and individuals (of course) to the individual scale of the body, but with words and people rather than space and places.

One of our chief findings in relation to the CL tools in AntConc (such as word counts, frequency, concordance, N-grams, collocation, and keyword comparisons between corpora) are most useful when one is asking quite specific questions about how people speak in the interviews about their experiences. For example, we found that women tended to mention other women and girls and family members more than men, and to speak about what they did and did not know during the events they remember. Men tended to mention more place names and to say more about the places where they were put to forced labor and the kind of labor they did. The CL tools will also be extremely useful in “cleaning” the 1,800 interviews, as the tools flag terms the built-in data dictionary does not recognize (crucial for correctly tagging foreign words and phrases).

They quickly revealed that our supposedly English-language interview transcripts included interviews in French and Polish that must be removed.

Concordance will also be an important tool for developing a Holocaust-specific, historically meaningful set of semantic tags for analysis with our NLP toolset, Wmatrix. We think that semantic tagging has significant possibilities for developing a controlled vocabulary for topic searching, in relation to certain kinds of experience (such as forced labor) in particular places. Most important for our core geographical questions, being able to include non-coordinate places in this controlled vocabulary could significantly – perhaps even dramatically – enhance our ability to find and compare spatial experiences across hundreds and thousands of testimonies. For humanistic spatial analysis, it will be just as important, for example, to include “attic” and “cellar” and “barn” as the more familiar place terms, “Auschwitz” and “ghetto.”

The CL tools could also be useful for grouping interviews into analytically useful sub-corpora – for the “scaling up” parts of our research. We have done this already by creating sub-corpora for males and females, interviews that mention a ghetto, and those that include reference to two of our study locations, the ghettos in Budapest and Krakow. Many other groupings are possible, such as Hungarian vs. Polish women; survivors of Buchenwald compared to those who survived Bergen Belsen, and so on. With further tagging of interviews by the age of the survivor at the time of the Holocaust and when they were interviewed (information available from VHA metadata and within some USHMM transcripts), we could compare the memories and modes of expression of those who were young children versus teens or young adults during the war. It could be more challenging to tag individuals according to their social class or education or linguistic abilities, but these differentiations could also yield valuable analytical insights. Interviews could be grouped by factors related to the interview process as well, such as the year of the interview, the interviewer, and the organization that arranged and archived the interview. This would enable more comprehensive and detailed comparison of interviews as constructed artifacts of recorded memory, a field of growing interest within Holocaust Studies and oral history more broadly.

We also have a better understanding now of the limitations of these tools. It is difficult to see sufficient context in the AntConc and Wmatrix interfaces to grasp the nuances of spoken language. Comparing online searches to the original videos and transcripts will be part of our method, but both are time-consuming and so are most suited to intensive work on a few particularly rich or relevant interviews. We have also learned that the very tagging that makes it possible for linguistic software to identify parts of speech, semantic meaning, and place names also inserts strings of characters that clog the narrow view of context provided by the programs. The visualization tools in AntConc and Wmatrix are very useful for identifying temporal and semantic patterns in any number of texts. The concordance plots in AntConc are particularly good for quickly finding interviews that have extensive discussion of a given theme or place.

*Goal 2: Software modules, data dictionary.* This goal was hobbled by the delay in receiving VHA transcripts. The software modules are nearly completed, however, and will be posted on GitHub and flagged on the Holocaust Geographies Collaborative website at Texas State University as soon as they are ready. The data dictionary will be developed during our continued analysis of the interview transcripts. It should be done before December 2018. These delays,

however, have been more than offset by the large cache of evidence we now have to mine and the draft Holocaust gazetteer this project has produced. The whole team is committed to complete the project as proposed – in fact, our work with the transcripts has accelerated since March 2018.

*Goal 3: Publications.* We have published one substantive article in a top GIS journal and have another in press with the forthcoming volume in the bi-annual, highly selective book of best essays from the world's leading Holocaust Studies conference, *Lessons & Legacies*. We have also written several other essays about the conceptual basis of this project and our preliminary findings (see Products, below). We plan to submit at least two more journal articles by the end of 2018.

*Goal 4: Presentations.* Team members have given far more presentations at academic conferences and as invited speakers than we proposed. Knowles, Cole, Giordano, and Jaskot spoke about this project in dozens of presentations in the United States, Canada, the United Kingdom, France, Poland, Hungary, and Lithuania. These included a number of invited keynote lectures (see Appendix B, below).

Through our continually expanding network of scholars engaged in digital history, including digital Holocaust Studies, we have come to realize that more and more researchers look to our methods and research questions for inspiration, guidance, and potential collaboration. Knowles and Cole were invited to a specialist workshop on qualitative spatial reasoning organized by David Bodenhamer and others, who see our work as potentially leading to widely applicable methods for studying the spatial aspects of experience recorded in all kinds of textual material and the spoken record. Our team is discussing collaboration with one or more of the projects sponsored by EHRI (European Holocaust Research Infrastructure), including working with researchers from USHMM and Yad Vashem, the national Holocaust memorial, museum, and archive of Israel, to develop an authoritative gazetteer of the Holocaust. The NEH Start-Up Grant was critical in pushing our research beyond the confines of GIS and perpetrator-generated evidence. It has opened up new audiences and many more avenues of research for digital Holocaust Studies and related fields.

### **Audiences**

The main audiences for this project are the interdisciplinary fields of Holocaust Studies and Digital Humanities, History and Geography, and GIScience, along with the more specialized fields of Historical GIS, Spatial History, and GeoHumanities. The geographic reach of our research under this grant is international, including the United States, Canada, United Kingdom, and a number of other European countries. While we have not counted the size of audiences who have heard our presentations, a conservative estimate would be at least one thousand people. The most significant additions to our audience in relation to this grant are the scores of graduate students in Holocaust Studies and the Digital Humanities who have seen our presentations, and the rapidly growing awareness of our work among Holocaust scholars in Eastern Europe.

During the grant period, our team also entered into discussions with two major Holocaust museums – USHMM in Washington, DC, and the Imperial War Museum in London – about how our geographical approach to the Holocaust might become part of their public exhibitions. We are very excited about these possibilities, because of the museums’ popularity with the public and their very high curatorial standards. In June 2018, Knowles and Jaskot began discussing a possible collaboration with cartographers at National Geographic, an organization with which Giordano has an ongoing relationship through National Geographic’s promotion of geographic education at Texas State University.

## **Evaluation**

This grant did not include formal evaluation. It is too soon to gauge public response to our work with Holocaust interviews. Anecdotally, however, response to our presentations has been overwhelmingly positive. For example, after Knowles’s lecture during Holocaust Remembrance Week at Oregon State University in 2017, the audience was so stimulated that discussion went on for nearly an hour, and continued in the lobby as Knowles signed copies of the team’s book, *Geographies of the Holocaust*. Her presentation at the mass murder conference in Vilnius, Lithuania, led to a number of invitations to collaborate, including to consult with a new museum of the massacre at Babi Yar in Kiev, Ukraine. The balance we aim to strike between telling powerful visual stories and using critical analysis at many scales seems to appeal to lay people and scholars, humanists and social scientists.

## **Continuation of the Project**

*Visualizing Spatial Experience in the Holocaust* was a key step toward incorporating victims’ perspective in all aspects of the Holocaust Geography Collaborative’s ongoing research. In addition to completing the data dictionary and writing articles about our methodology and analytical findings, we plan to build on the NEH Start-Up Grant activities in a number of ways. We have submitted grant proposals to fund several of them.

### Grant proposals funded:

In early 2018, Jaskot received funding from Duke University and USHMM to hold an event called “Visualization and the Holocaust: Analyzing Space and Place with Digital Methods and Geographical, Textual, and Visual Sources” in January 2019 at Duke. The event will include a one-day public conference, with presentations by Holocaust Geographies Collaborative members and other experts in geovisualization and Holocaust scholarship. This will be followed by a closed meeting of Collaborative members with the geovisualization experts, the goal of which is to brainstorm new visual methods to combine the strengths of GIS, cartography, other modes of data visualization, and linguistic analysis.

In spring 2018, Victoria Szabo (Duke University) and co-PIs Jaskot and Mark Olson received funding from the Getty Foundation for the Summer Institute on Advanced Topics in Digital Art History: 3D and (Geo)Spatial Networks, held at Venice International University. The two-week Institute runs in two successive years, June 2018 and June 2019.



As an extension of the Getty Foundation-funded Summer Institute on advanced art historical topics dedicated to 3D modeling and spatial analysis, Jaskot will work on a digital reconstruction of the Krakow ghetto. With Duke funding, he and his research team at the Wired! Lab will begin development in fall 2018, along with Knowles and her PhD student, Justus Hillebrand, with the aim of visualizing the ghetto in relation to evidence from Holocaust survivor interviews and our HGIS of ghettos in the Krakow region and beyond.

In 2017, Cole and Giordano received £50,000 from the Tony Schiff Foundation to enrich their HGIS of the Budapest ghetto with survivor data, which will also facilitate connecting survivor testimony to locations in the city.

#### Grant proposals under review or not funded

In January 2018, Knowles submitted a proposal for an NEH Digital Humanities Advancement Grant of \$325,000 to fund three years' work to develop an historical GIS of Holocaust ghettos in Eastern Europe, a gazetteer of Holocaust places, and methods for jointly analyzing and visualizing ghettos with the experiences recorded in survivor interviews. Decision expected in August 2018.

In October 2017, team members Gregory, Rayson, and Knowles submitted a proposal to the Economic and Social Research Council North West Social Science Doctoral Training Partnership program for a three-year CASE PhD studentship. Knowles and Rayson were also included in Gregory's 2017 proposal for a five-year Advanced Grant from the European Research Council for a project on geographical analysis of digital texts, including Holocaust survivor interview transcripts. Although these proposals were not successful, they helped launch the involvement of Rayson and Gregory's PhD student, Alex Reinhold, who became an outstanding contributor to *Visualizing Experience in Holocaust Testimony*.

#### Proposals planned:

Cole will submit a proposal with the Imperial War Museum, London, to the AHRC in July 2018, for a project called "One Day." This project aims to present the complexity of the Holocaust at its many scales by looking at a single day across Europe and the German-occupied former Soviet territories.

In fall 2018, Cole and Giordano plan to submit a major proposal to the trans-Atlantic competition (NSF and ESRC, or NEH and AHRC) to fund their ongoing research. It will revolve around the idea of conceptualizing and designing a GIS of place and space centered on their HGIS of Budapest and populated with testimonies. Social and physical networks, topology, and a careful and close listening to testimonies (with and without CL) will be crucial methods.

#### **Long Term Impact**

The long-term impact of our analysis of Holocaust survivor interviews remains to be seen. If reviewers' swift approval of Cole and Giordano's article for *Transactions in GIS* is any

indication, however, GIScience and GeoHumanities scholars, along with humanistic geographers and computer scientists, are likely to be very interested in our work. The high profile our project now has in these fields and in Holocaust Studies is indicative of how much scholars value our critical yet exploratory approach. In Holocaust Studies, there is a wave of interest in finding ways to bridge the gap between studies of perpetrators (the Nazis and their allies) and studies of victims. *Visualizing Spatial Experience in the Holocaust* is our first major step toward accomplishing that goal, by focusing a new set of methodologies on victims' experiences.

#### Impact on research team members

Knowles was appointed to a five-year term as the Colonel James C. McBride Distinguished Professorship in History at University of Maine in September 2017. In 2015-2016, Knowles founded the University of Maine Digital & Spatial History Lab, whose work focuses mainly on the Holocaust Geographies project. In 2016 she joined the USC Shoah Foundation Visual History Archive's External Advisory Committee.

In 2017, Giordano was elected President of the UCGIS (University Consortium for Geographic Information Science), on a platform of promoting the integration of GIScience with humanistic research. The 2019 meeting of the UCGIS will revolve around the GeoHumanities. Giordano hopes that the meeting can lead to a good discussion with GIScientists about the topics our group has been interested in for several years, including qualitative methods, GIS of place, place and space in GIScience, and representing experience through mixed-methods approaches including GIS. UCGIS is also thinking about sessions on these themes for emerging scholars and graduate students. One angle UCGIS members are interested in is "big data" and in this context Holocaust testimonies could be a good case study.

Jaskot joined the Art History Department at Duke University in August 2017 and was appointed Director of the Wired! Lab for Digital Art History. In June 2018, he co-directed the two-week Visualizing Venice Summer Institute in Venice, sponsored by the Getty Museum and Duke University. He will co-direct the follow-up Institute in June 2019.

Cole was appointed to the Advisory Board for the new Holocaust permanent exhibition at the Imperial War Museum, and was appointed as a research associate at that museum.

## Appendices

### Appendix A: Preliminary products – Conference papers

Tim Cole and Alberto Giordano, “Digitally Exploring Social Networks During the Holocaust.” Lessons and Legacies biannual conference, Claremont-McKenna College, Ontario, CA (2016).

Tim Cole and Alberto Giordano. 2017. “GIS and Corpus Linguistics: Ghetto Space and the Place of the Ghetto in Budapest.” Digital Approaches to Genocide Studies, USC Shoah Foundation Center for Advanced Genocide Research, Los Angeles, CA (2017).

Tim Cole, “Close and Distant Reading of Holocaust Testimony,” American University, Paris (February 2018).

Tim Cole, “Thinking Spatially about Holocaust Testimony,” Jagiellonian University, Krakow (May 2018).

Tim Cole and Alberto Giordano, “GIS, Space, Place and the Holocaust,” Keynote at RFHE Digital Humanities Workshop, Wiener Library, London (September 2018).

Tim Cole and Alberto Giordano, “Geographies of the Holocaust, Budapest 1944-45,” Keynote at EHRI Workshop, Budapest (September 2018).

Alberto Giordano, “Geographies of the Holocaust,” Department of Geography, University of Cologne, Cologne, Germany (2017).

Alberto Giordano, “The Expanded Potential of GIS for the Study of the Holocaust. Digital Approaches to Genocide Studies,” USC Shoah Foundation Center for Advanced Genocide Research, Los Angeles, CA. (2017).

Alberto Giordano, “Spaces and Places of the Holocaust,” keynote address, Digital Humanities Symposium, University of Oklahoma, Norman, OK (2017).

Alberto Giordano, “From the National to the Individual: A Narrative of the Holocaust in Italy,” Holocaust Studies after the Spatial Turn, International Research Workshop organized by the Centre for Holocaust and Genocide Studies, University of Bristol and the Holocaust Research Institute, Royal Holloway, University of London. Bristol and London (2017).

Alberto Giordano, “Spatial Memory of the Holocaust,” Association of American Geographers, Boston, MA (April 2017)

Alberto Giordano, “From the National to the Individual: A Narrative of the Holocaust in Italy,” Association of American Geographers, Boston, MA (April 2017).

Alberto Giordano, "From the National to the Individual: Narratives of the Holocaust in Italy," Italian Academy, Columbia University, San Diego (February 2018).

Alberto Giordano and Tim Cole, "The Limits of GIS: Towards a GIS of Place," ESRI User Conference, San Diego (July 2018).

Paul B. Jaskot, "The Architecture of the Holocaust: How Art History and Digital Humanities Help us Analyze Difficult Building Sites." Frick Museum of Art, New York (October 2017). Frick lecture online at <https://vimeo.com/239847997>.

Paul B. Jaskot, "Scale and Ambiguity in the Digital Analysis of the Spaces of the Holocaust (or Why Bother Making an Art Historian a Member of Your Team)." 2018 Duke Research Computing Symposium. Duke University.

Paul B. Jaskot, "A Plan, a Testimony, and a Digital Map: Analyzing the Architecture of the Holocaust." University of New Hampshire, Durham, New Hampshire, and Anne Tanenbaum Centre for Jewish Studies, University of Toronto, Canada (March 2018). Tanenbaum lecture online at <https://www.youtube.com/watch?v=elckaolKrQ4>.

Paul Jaskot, Anne Kelly Knowles, and Justus Hillebrand, "Visualizing Krakow, Then and Now: Analog and Digital Methods for Analyzing Architectural Goals in the German Occupation," American Historical Association Annual Meeting, Chicago (January 2019).

Anne Kelly Knowles, Justus Hillebrand, Levi Westerveld, Mara Moettus, Paul B. Jaskot, and Laura Strom, "Placing the Incommensurable," American Association of Geographers, San Francisco, CA (April 2016).

Anne Kelly Knowles, Justus Hillebrand, Levi Westerveld, Laura Strom, Mara Moettus, Paul B. Jaskot, Ben Blackshear, and Erik Steiner, "Can Digital Holocaust Geographies Be Human?" Space, Place, and Geographic Thinking in the Humanities conference, Center for Geographic Analysis Conference, Harvard University (April 2016).

Anne Kelly Knowles, "Visual Ways of Knowing the Past" (invited), German Historical Institute, Workshop and Conference, Creating Spatial Historical Knowledge: New Approaches, Opportunities, and Epistemological Implications of Mapping History Digitally, Washington, DC (October 2016).

Anne Kelly Knowles, "Seeking Space and Place in Holocaust Testimony" (invited), Center for Geographic Analysis, Harvard University (October 2016).

Anne Kelly Knowles, Paul B. Jaskot, and Justus Hillebrand, "Perpetrator versus Victim Perspective: Mapping and the Testimony of Forced Labor," Lessons & Legacies conference, Claremont McKenna College, Claremont, California (November 2016).

Anne Kelly Knowles, "Seeking Space and Place in the Holocaust," Spatial & More Colloquium, University of Maine (November 2016).

Anne Kelly Knowles, Justus Hillebrand, Jennifer Cashin, and Sarah Treadwell, "Placing Holocaust Testimony," American Association of Geographers conference, Boston (April 2017).

Anne Kelly Knowles, "Geographies of the Holocaust," As Mass Murder Began: Identifying and Remembering the Killing Sites of Summer-Fall 1941, conference sponsored by the International Holocaust Remembrance Alliance, Vilna Gaon State Jewish Museum, Vilnius, Lithuania (March 2017).

Anne Kelly Knowles, "Geographies of the Holocaust," European Humanities University, Vilnius, Lithuania (March 2017).

Anne Kelly Knowles, "Visualizing Space and Place" (lecture) and "Strategies for Visualizing Space and Place" (workshop), *Space and Place in the Humanities: An Introduction to the GeoHumanities*, NEH Summer Institute for College and University Teachers, Northeastern University (August 2017).

Anne Kelly Knowles, Paul B. Jaskot, and Justus Hillebrand, "GIS and Corpus Linguistics: Mixed Digital Methods for the Exploration of Forced Labor in Krakow District Ghettos," Digital Approaches to Genocide Studies conference, Center for Advanced Genocide Research, USC Shoah Foundation, Los Angeles (October 2017).

Anne Kelly Knowles, "Knitting Together Experience and Place: Lessons from the Holocaust Geographies Project," Social Science History Association, Montreal (November 2017).

Anne Kelly Knowles, "Spatial Visions vs. Experience on the Ground: Challenges in Explaining the Geographies of the Holocaust" and "Telling Spatial Stories of the Holocaust," Humanities Center, University of Pittsburgh (January 2018).

Anne Kelly Knowles, "Locating the Holocaust: Issues in Connecting Traumatic Experience to Perpetrator Places," keynote lecture, Canadian Society for Digital Humanities, Regina, Saskatchewan, Canada (May 2018).

#### **Appendix B: Publications related to this grant**

Giordano, Alberto, and Tim Cole, "The Limits of GIS: Towards a GIS of Place," *Transactions in GIS* (June 2018): 1-13, DOI 10.1111/tgis.12342.

Jaskot, Paul B., review of Paulo Giaccaria and Claudio Minca, eds., *Hitler's Geographies: The Spatialities of the Third Reich. German History* (May 2017): <https://doi.org/10.1093/gerhis/ghx004>.

Jaskot, Paul B., and Ivo Van Der Graaff, "Historical Journals as Digital Sources: Mapping Architecture in Germany, 1914-24," *Journal of the Society of Architectural Historians* 76: 4 (December 2017): 483-505.

Knowles, Anne Kelly, "A More Humane Approach to Digital Scholarship," *Parameters: Knowledge Under Digital Conditions*, Social Science Research Council (2016). Posted at <http://parameters.ssrc.org/2016/08/a-more-humane-approach-to-digital-scholarship/>.

In press or under review

Guan, Wendy W., Matthew W. Wilson, and Anne Kelly Knowles, "Evaluating the Geographic in GIS (or How Might GIS Do Geography?)," in final review, *Geographic Review*.

Jaskot, Paul B., and Alexandra Garbarini, eds., *New Approaches to an Integrated History of the Holocaust: Social History, Representation, Theory* (Evanston: Northwestern University Press, forthcoming 2018).

Knowles, Anne Kelly, Paul B. Jaskot, Tim Cole, and Alberto Giordano, with Maël Le Noc, Paul Rayson, and Ian Gregory, "Mind the Gap: Reading Across the Holocaust Testimonial Archive," invited article in Tim Cole and Simone Gigliotti, eds., *Reading Across the Holocaust Testimonial Archive, Lessons & Legacies 14* (Evanston, IL: Northwestern University Press, expected publication 2019).

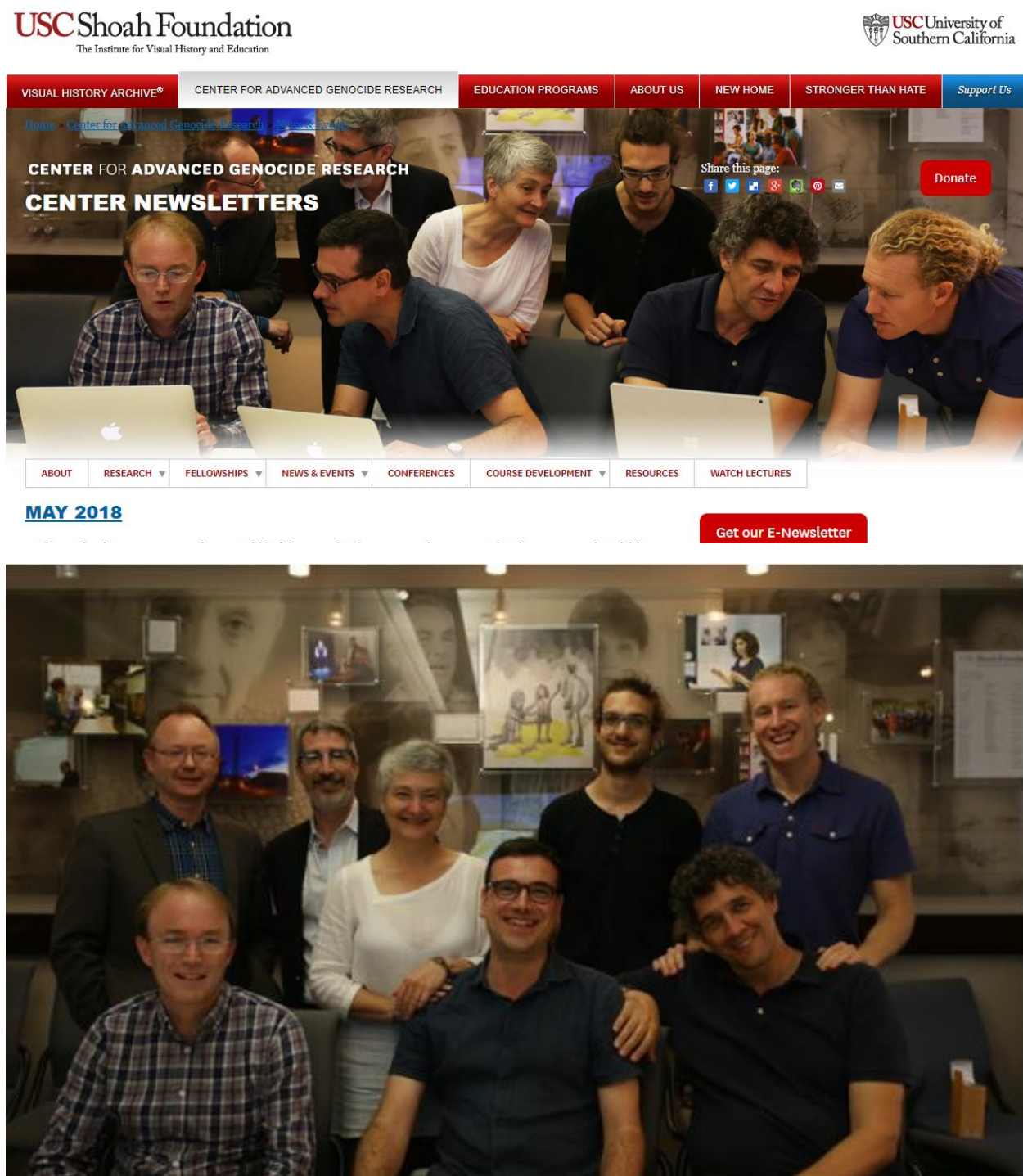
**Appendix C: Publicity or media coverage and screen shots from websites**

Knowles interviewed with Kurt Anderson, novelist and host of NPR's *Studio 360*, on *Nerdette*, September 7, 2018. Podcast at <https://www.wbez.org/shows/nerdette/separating-fantasy-from-reality-with-author-kurt-andersen/71f27b7e-397c-4ac2-a611-75eca35ff81d>.

Knowles's research was featured in "Line of Sight," by Beth Staples, in *UMaine Today* (fall/winter 2017). Online article at <https://umainetoday.umaine.edu/stories/2017/line-of-sight/>, with video at <https://www.youtube.com/watch?v=-4s-8IfiLGk>.

The Collaborative's research was highlighted in the Center for Advanced Genocide Research (CAGR) Newsletter in November 2016: [http://sfi.usc.edu/news/2016/11/12674-holocaust-geographies-collaborative-november-2016-visit-summary?utm\\_source=CAGR%20Newsletter&utm\\_medium=email&utm\\_campaign=November%202016](http://sfi.usc.edu/news/2016/11/12674-holocaust-geographies-collaborative-november-2016-visit-summary?utm_source=CAGR%20Newsletter&utm_medium=email&utm_campaign=November%202016).

## Appendix D: Screen shots from websites



**Holocaust Geographies Collaborative at USC Shoah Foundation Center for Advanced Genocide Research.** Left to right: Wolf Gruner, Paul Rayson, Paul B. Jaskot, Anne Kelly Knowles, Tim Cole, Maël Le Noc, Alberto Giordano, Erik Steiner. Photos from planning meeting for *Visualizing Spatial Experience in the Holocaust*. CAGR Newsletter Nov. 2016.



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Probing the

Ethics of

Alberto Giordano, Anne Knowles, Paul Jaskot and Tim Cole have been interviewed by Claudio Fajó and Todd Presner in a chapter of the book *Probing the Ethics of Holocaust Culture*, published in 2018.

Visit the [Publication page...](#)

About the collaborative

The Holocaust Geographies Collaborative is a multi-institutional, collaborative research group that uses mapping and geography to examine spaces and places of the Holocaust. The group came together in 2007 at a workshop hosted by the United States Holocaust Memorial Museum to discuss how geography, mapping and geo-visualization can shed new light on the history of the Holocaust.

So far, the Holocaust Geographies Collaborative has examined several topics: the spatial system of concentration camps; an architectural and visibility study of Auschwitz; victim transports to Italy; forced evacuations from Auschwitz at the end of World War II; and a detailed study of the Budapest ghetto.

In their research, the group creates maps and other visualizations (geographic information science, or GIS) illustrating where events of the Holocaust occurred, where and how people moved from place to place, and other data. For example, the group created an interactive map showing the locations of all the concentration camps in Europe and when they opened and closed over time.

Discover the collaborative's work with...

The USC Shoah Foundation Center for Advanced Genocide Research

The Spatial History Project at Stanford University

The United States Holocaust Memorial Museum

USC Shoah Foundation

Stanford University

UNITED STATES HOLOCAUST MEMORIAL MUSEUM

Upcoming Events

FEB 15

Roundtable: Big Data and Testimonies

American University of Paris

Tim Cole will be giving a presentation titled "Reading one testimony, distant reading 54,000" as part of the "Big Data and Testimonies" roundtable organized by the American University of Paris on February 15, 2018

FEB 26

Toni Schiff Memorial Lecture

The Wiener Library, London

Tim Cole will be giving the Toni Schiff Memorial Lecture, titled "Moving Holocaust Stories", at the Wiener Library for the Study of the Holocaust and Genocide in London, on February 26, 2018.

MAR 12

Lecture: A Plan, a Testimony, & a Digital Map

University of Toronto

Paul Jaskot will be giving a lecture titled "A Plan, a Testimony, & a Digital Map: Analyzing the Architecture of the Holocaust" at the University of Toronto on March 12, 2018.

MAR 19

Paul Jaskot to give Invited Lecture

University of New Hampshire

Paul Jaskot will be giving a lecture at the University of New Hampshire on March 19, 2018

See past events

Funding and Support from

NATIONAL ENDOWMENT FOR THE HUMANITIES

NSF

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UNITED STATES HOLOCAUST MEMORIAL MUSEUM

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**Holocaust Geographies Collaborative homepage,** <http://holocaustgeographies.geo.txstate.edu/>.  
 See next two pages for principal investigators and affiliates,  
<http://holocaustgeographies.geo.txstate.edu/people>.

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## People



### Current Principal Investigators



#### Tim Cole

University of Bristol  
[tim.cole@bristol.ac.uk](mailto:tim.cole@bristol.ac.uk)

Tim Cole is Professor of Social History at the University of Bristol. He received his PhD in Geography from the University of Cambridge. Tim has wide ranging interests in social and environmental histories, historical geographies and digital humanities and also works within the creative economy. His core research has focused in the main on Holocaust landscapes - both historical and memory landscapes - writing books on Holocaust representation (*Images of the Holocaust/Selling the Holocaust*, 1999), the spatiality of ghettoization in Budapest (*Holocaust City*, 2003), social histories of the Hungarian Holocaust (*Traces of the Holocaust*, 2011) and the spatiality of survival (*Holocaust Landscapes*, 2016) as well as co-editing a collection of essays emerging from an interdisciplinary digital humanities project he co-led (*Geographies of the Holocaust*, 2015). Alongside this research, Tim has also developed interests in environmental history, being a co-editor of a study of military landscapes (*Militarised Landscapes*, 2010) and now working on a new book that explores social, cultural, landscape and environmental change in post-war Britain (*About Britain*).

[List of publications](#)



#### Alberto Giordano

Texas State University  
[a.giordano@txstate.edu](mailto:a.giordano@txstate.edu)

Alberto Giordano is Professor and Chair of the Department of Geography at Texas State University in San Marcos. He holds a PhD in Geography from Syracuse University, an MA in Geography from the University of California at Santa Barbara, and a BA in Geography from the University of Padua in Italy. Before pursuing an academic career, he worked in the map publishing sector and in the GIS field as a consultant for private companies and public agencies in Italy and internationally. His most recent work has focused on the geography of the Holocaust and genocide, spatial applications of forensic anthropology, and historical GIS. He is the author of one book (in Italian) on quality control in GIS and of several publications in GIScience, historical cartography, and hazards geography. He is a member of the Editorial Board of the 2009 edition of the Goode's World Atlas.

[Resume and list of publications](#)



#### Paul Jaskot

Duke University  
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<http://www.dukewired.org/>

Paul Jaskot is professor of art history in Duke University's Department of Art, Art History and Visual Studies. He teaches courses on the history of architecture, and specialized courses on the art and architecture of modern Germany and the Holocaust as well as topics in Chicago architecture. Joining Duke in 2017, he is the Director of the Wired! Lab for Digital Art History & Visual Culture, to which he also contributes classes on topics related to the field of digital art history. Jaskot's teaching extends from his research interests, and he has lectured on many topics related to modern German culture in particular. His specific area of research has mostly focused on the cultural history of National Socialist Germany and its postwar impact on art and architecture. In general, his classes and his scholarly work tend to focus on the central art historical question of how art and politics intersect in the modern world. He has published a number of essays that explored the political function of architecture in the modern period, leading up to his most recent book *The Nazi Perpetrator: Postwar German Art and the Politics of the Right* (Minnesota 2012). He has also co-authored three essays in historical GIS and the Holocaust in *Geographies of the Holocaust* (Indiana 2014). His current project focuses on a deep history of the German construction industry, for which he will contribute context on forced-labor construction work to the ongoing collaborative analysis of ghettos in occupied Europe led by Anne Kelly Knowles. In addition to his research, Jaskot has served as a member of the Board of Directors (2004-2011) of the College Art Association, the U.S. professional group for artists and art historians, as well as Director of the Holocaust Education Foundation's Summer Institute on the Holocaust and Jewish Studies (2007-2013). From 2008-2010, he was the President of CAA. Prior to his appointment at Duke, Jaskot was a professor of art history at DePaul University and the inaugural Director of DePaul's Studio CHI (Computing/Humanities Interface).

[Resume and list of publications](#)



#### Anne Knowles

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Anne Kelly Knowles is the Colonel James C. McBride Distinguished Professor of History at the University of Maine-Bronx. She received her PhD and MSc in Geography from University of Wisconsin-Madison. She has been a leading figure in the Digital and Spatial Humanities, particularly in the methodologies of Historical GIS, for more than twenty years. She has written or edited five books, including *Placing History: How Maps, Spatial Data, and GIS Are Changing Historical Scholarship* (2009); *Mastering Iron: The Struggle to Modernize an American Industry, 1800-1868* (2013); and *Geographies of the Holocaust* (2014). Anne's pioneering work with historical GIS has been recognized by many fellowships and awards, including the American Ingenuity Award for Historical Scholarship (*Smithsonian* magazine, 2012) and a Guggenheim Fellowship (2015). She is a founding member of the Holocaust Geographies Collaborative.

[List of publications](#)

## Affiliates



### Ian Gregory

Lancaster University  
[I.Gregory@lancaster.ac.uk](mailto:I.Gregory@lancaster.ac.uk)

Ian Gregory is a geographer by training and has spent much of his career working applying Geographical Information Systems (GIS) to historical research, a field that has become known as Historical GIS. As a result of the growth of Digital Humanities, Ian has become particularly interested in using GIS with texts as well as the more traditional quantitative sources. This has been the subject of a number of successful grant

applications including the European Research Council grant *Spatial Humanities: Texts, GIS, Places* project.

[Resume and list of publications](#)



### Justus Hillebrand

University of Maine and University of Cologne  
[justus.hillebrand@maine.edu](mailto:justus.hillebrand@maine.edu)

Justus Hillebrand is a PhD candidate (ABD) at the University of Maine and University of Cologne, Germany. He has worked with Anne Kelly Knowles on the Ghettoa Database since early 2016, including developing prototype relational database designs, testing their feasibility for mapping in GIS, writing rules for data entry, and training undergraduate research assistants on the project. His dissertation, co-supervised by Knowles, is a transatlantic knowledge history of agricultural modernization in late-nineteenth-century Germany and the United States, in which he employs GIS and other digital methods. Justus has presented several papers jointly with Knowles at international conferences, including the American Association of Geographers and Lessons and Legacies. He has published an article on African Americans in Maine in *Maine History* and has an article on his current research forthcoming in a Routledge volume on agricultural reform and resistance in an age of globalization.

[Resume and list of publications](#)



### Maël Le Noc

Texas State University  
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Maël Le Noc is a PhD student in Geography at Texas State University working under the supervision of Alberto Giordano. He grew up in France and received his master's degree in Geography from Texas State University in May 2016. His main research interests include historical GIS and the Geography of the Holocaust, with a focus on family separations. He also cooperates with the collective "Connus à cette adresse" which

investigates the question of housing in Paris during the Occupation period.

[Resume and list of publications](#)



### Paul Rayson

Lancaster University  
[p.rayson@lancaster.ac.uk](mailto:p.rayson@lancaster.ac.uk)

Paul Rayson is director of the UCREL research centre and a Reader in the School of Computing and Communications, in the Infolab21 building at Lancaster University in Lancaster, UK. A long term focus of his work is the application of semantic-based natural language processing in extreme circumstances where language is noisy (e.g. in historical, learner, speech, email, txt, and other computer-mediated communications varieties). His applied research is in the areas of dementia detection, online child protection, cyber security, learner dictionaries, and text mining of historical corpora and annual financial reports. Paul is a co-investigator of the five-year ESRC Centre for Corpus Approaches to Social Science (CASS) which is designed to bring the corpus approach to bear on a range of social sciences. He is also a member of the multidisciplinary centre Security Lancaster, Lancaster Digital Humanities, and the Data Science Institute.

[List of publications](#)



### Erik Steiner

Stanford University  
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Erik Steiner is the Co-Director and co-founder of the Spatial History Project at the Center for Spatial and Textual Analysis (CESTA) at Stanford University and a former President of the North American Cartographic Information Society (NACIS). The Spatial History Project is recognized as one of the world's leading digital humanities labs engaged in spatial analysis and visualization - over the last 10 years it has developed more than 60 such projects and collaborated on dozens more. In addition to acting as Co-Director, Erik is an interaction designer and cartographer with deep experience working at the intersection of technology, creative arts, and academic scholarship in the humanities and social, and environmental sciences. He has led the design and development of dozens of interactive and information design projects through major grants from the Getty, Kress and Mellon Foundations, NEH, NSF, and ACLS.

[CESTA website](#)



### Anika Walke

Washington University in St. Louis  
[a.walke@wustl.edu](mailto:a.walke@wustl.edu)

Anika Walke, Ph.D., is Assistant Professor in the Department of History at Washington University in St. Louis. Anika was educated at the University of Oldenburg, Germany and the State University of St. Petersburg, Russia, before she completed her doctorate at the University of California-Santa Cruz. Anika's research and teaching interests include World War II and Nazi genocide, migration, nationality policies, and oral history in the (former) Soviet Union and Europe. Her book, *Pioneers and Partisans: An Oral History of Nazi Genocide in Belorussia* (Oxford University Press, 2016), weaves together oral histories, video testimonies, and memoirs to show how the first generation of Soviet Jews experienced the Nazi genocide and how they remember it after the dissolution of the USSR in 1991. A current research project is devoted to the long aftermath of the Holocaust and World War II. Foregrounding the role of space and place in her inquiry, Anika examines how people remember and live with the effects and repercussions of systematic violence and genocide in Belarus, including population losses, the ubiquity of mass grave sites, environmental damage as a result of warfare, and the destruction of cultural heritage sites.

[Resume and list of publications](#)

## Research projects



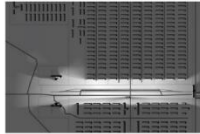
The Evolution of the SS  
Concentration Camp System, 1933-  
1945



Arrests of Italian Jews, 1943-1945



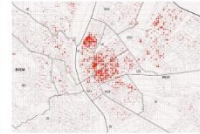
Mapping Mobility in the Budapest  
Ghetto



Auschwitz Study



Landscapes of Experience



Budapest Ghetto



A Geography of Complicity



The Holocaust in Italy



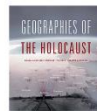
Mapping the SS Concentration Camp  
System over Space and Time

Research projects, <http://holocaustgeographies.geo.txstate.edu/research>.

## Selected Publications



### Edited Volumes



#### Geographies of the Holocaust

Edited by Anne Kelly Knowles, Tim Cole, and Alberto Bordinato  
Indiana University Press, 2014

This book explores the geographies of the Holocaust at many scales of human experience, from the European continent to the experiences of individual human bodies. Built on six innovative case studies, it brings together historians and geographers to interrogate the places and spaces of the genocide. The cases encompass the landscapes of particular places (the killing zones in the east, deportations from sites in Italy, the camps of Auschwitz, the ghettos of Budapest) and the intimate spaces of bodies as evacuation members. Geographies of the Holocaust both forward modes and a research agenda for different ways of visualizing and thinking about the Holocaust by examining the spaces and places where it was enacted and experienced.

#### Table of contents

1. Geographies of the Holocaust / Alberto Bordinato, Anne Kelly Knowles, and Tim Cole
2. Mapping the SS Concentration Camps / Anne Kelly Knowles and Paul B. Jaskot, with Benjamin Perry Blackshaw, Michael De Arment, and Alexander Yule
3. Rethinking the "hunt for Jews": A Space-Temporal Analysis of Jewish during the Holocaust in Italy / Alberto Bordinato and Anna Isenke
4. Killing on the Ground and in the Mind: The Geographies of Genocide in the East / Vladimir W. Bevan, with Anne Kelly Knowles
5. Defining the Ghetto to the West: The 20th Century Geography of the Budapest Ghetto / Tim Cole and Alberto Bordinato
6. Visualizing the Archipelago building at Auschwitz: Is a Geographic Problem? / Paul B. Jaskot, Anne Kelly Knowles, and Christopher Hawkey, with Benjamin Perry Blackshaw
7. From the Camp to the Road: Representing the Executions from Auschwitz, January 1945 / Simon Sigaloff, Mark J. Neumann, and Eric Steiner
8. Afterword / Paul B. Jaskot and Tim Cole

### Monographs



#### Holocaust Landscapes

Tim Cole  
Bloomsbury, 2016

Holocaust Landscapes is a book of greater originality and imagination. The theme is the places of the Holocaust, the Holocaust as place-making event for both perpetrators and victims. Through spatial concepts such as distance and proximity, Professor Tim Cole tells the story of the Holocaust through a number of landscapes where genocide was implemented, experienced and resisted many of which have subsequently been forgotten in the post-war world. Drawing on survivor's narratives, Holocaust Landscapes moves between a series of ordinary and extraordinary sites and the people who inhabited them throughout the years of the Second World War.

Starting in Germany in the late 1930s, the book offers chronology and geographically westwards, ending in Germany in the final frantic months of the war. These landscapes range from the most iconic: synagogues, ghettos, railroad, camps, sites to less well known sites (forests, sea mountains, rivers, roads, and disused persons camps). Holocaust Landscapes provides a new perspective surrounding the shifting geographies and stories of this dark period in world history.

### Chapters in books



#### Interview with Anne Knowles, Tim Cole, Alberto Bordinato, and Paul B. Jaskot, Contributing Authors of *Geographies of the Holocaust*

Interview by Claudia Folpe and Todd Presner

#### In *Pressing the Ethics of Holocaust Culture*

Edited by Claudia Folpe, Todd Presner and Todd Presner  
Harvard University Press, 2015



#### Geographies of Ghettoization: Absences, Presences and Boundaries

Tim Cole

#### In *Hitler's Geographies: The Spatialities of the Third Reich*

Edited by Paolo Gazzetti and Claudio Minoli  
Chicago University Press, 2015



#### Microhistories, Microgeographies: Budapest, 1944 and Scales of Analysis

Tim Cole and Alberto Bordinato

#### In *Microhistories of the Holocaust*

Edited by Claire Zalc and Tal Zuckerman  
Berghahn Books, 2016



#### Rethinking Segregation in the Ghetto: Invisible Walls and Social Networks in the Dispersed Ghetto in Budapest, 1944

Tim Cole and Alberto Bordinato

#### In *Lessons and Legacies III: Expanding Perspectives on the Holocaust in a Changing World*

Edited by Henry Cole and Tim A. Schabas  
Northwestern University Press, 2014

### Journal Articles

Jaskot, P.B. and van der Straat, L., 2017. Historical Journeys as Digital Sources: Mapping Architecture in Germany, 1914-14. *Journal of the Society of Architectural Historians*, 76(4), pp. 489-505.

Jaskot, P.B., 2017. Commentary: An Historical Questions, Geographic Concepts, and Digital Methods. *Historical Geography*, 45, pp. 50-55.

Burman, S. and Bordinato, A., 2015. Following Holocaust Standards for Historical GIS Research: A Case Study of the Holocaust in Budapest and the Armenian Genocide in Turkey. *International Journal of Applied Geospatial Research (IJAGRS)*, 6(4), pp.98-105.

Knowles, A., Westermarck, L., and Brown, L., 2015. Induction Visualization: A Humanistic Alternative to GIS. *Geotemporalities*, 101, pp. 229-265.

Jaskot, P.B., Knowles, A.K., Westermarck, L., Bordinato, A., and Zwick, G., 2016. A Research-based Model for Digital Mapping and GIS History. *Notes from the Field, American Society for Geographic Information*, 49, pp. 1-14.

Cole, T., 2015. Rethinking the First: Spatial Strategies of Telling Difficult Stories. *And History Review*, 42(1), pp.59-63.

Cole, T., 2014. "Nature Was Helping Us": Forests, Trees, and Environmental Histories of the Holocaust. *Environmental History*, 19(4), pp.669-695.

Cole, T., 2013. Holocaust landscapes: Rethinking the "death marches" in contemporary Europe. *Cahiers de géographie du Québec*, 57(242), pp.449-465.

Bordinato, A. and Cole, T., 2011. In place and space: Constructing social and spatial networks in the Budapest Ghettos. *Disasters in the US*, 35(1), pp.143-155.

Bevan, W., Cole, T., Sigaloff, S., Bordinato, A., Nelson, A., Jaskot, P.B., Knowles, A.K., Neumann, M., and Steiner, E.R., 2015. *Geographies of the Holocaust*. *Geographical Review*, 95(1), pp.103-121.

### Open Access Publications

Jaskot, P. and Knowles, A., 2012. Architecture and Maps, Testimonies and Archives: An Approach to Institutional History and the Built Environment in Nazi Germany. *The Annals of the Association of American Geographers*.

Knowles, A., 2013. A Place-History Approach to Digital Scholarship: Parameters, Knowledge Under Digital Conditions, Social Science Research Council.

For more publications, follow the "list of publications" links on the "People" page.

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# The Holocaust in Italy

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[Mapping the SS Concentration Camp System over Space and Time](#)
[About the Authors](#)

The history of the Holocaust in Italy is generally well known, but to date there has been little systematic analysis of its spatial dimensions. The objective of this case study is to examine the Holocaust in Italy from a geographical perspective, uncovering local and regional patterns as well as the temporal dimensions of the deportation process. We examine the spatial dimensions of the Holocaust from the perspective of both victims and perpetrators.

In 1938, the Italian Fascist regime under Benito Mussolini enacted a series of racial laws that placed multiple restrictions on the country's Jewish population. At the time the laws were enacted, it is estimated that about 46,000 Jews lived in Italy, of whom about 9,000 were foreign born and thus subject to further restrictions such as residence requirements. Large Jewish communities existed in Rome, Venice, Trieste, Florence, Ferrara, Turin, and other cities. Largely urban, Italian Jews were traditionally secular and very integrated, often intermarrying with non-Jews.

In July 1943, the Fascist regime fell. Two months later, Nazi German forces occupied the country. They installed Mussolini as the head of a new Fascist regime, the Italian Social Republic, though real power now lay in the hands of the Germans. September 1943 signaled the beginning of arrests and systematic deportations of Jews to the concentration and extermination camps in central and Eastern Europe. Estimates suggest that between September 1943 and March 1944, about 10,000 Jews were deported. The vast majority perished, principally at Auschwitz.

The objective of our work is to create a comprehensive Historical GIS of the Holocaust in Italy. The starting point of our study is a database of about 9,000 deportees created by the *Centro di Documentazione Ebraica Contemporanea* (Jewish Contemporary Documentation Center) in Milan and published in Italian in two successive editions. This database contains both spatial and aspatial information, including gender, date of birth, place of birth, parents, spouse, place of arrest, nationality of the arresting party (Italian or German), place(s) of detention, place of departure for the camps, departure and arrival dates, convoy, destination camp and fate. The experience of the deportees often varied based on demographic as well as geographic factors.

Our analysis is conducted at multiple spatial and temporal scales. At the national and regional spatial scales, we produced a series of maps that summarize the scope and extent of arrests of Jews in Italy, using a variety of analytical tools to discover trends and patterns in the mechanisms of deportation. As concerns the temporal scale, our analysis is conducted at three distinct scales: a (1) weekly and (2) monthly analysis of the spatial patterns of arrests, integrated by (3) a study of these patterns in two distinct periods (September to November 1943 and December 1943 to February 1944) corresponding in major shifts in the mechanisms of deportation.

Results indicate that the Holocaust in Italy possesses marked regional and temporal differences and that spatial-temporal patterns of deportation vary not only according to the socio-demographic characteristics of the victims – in ways that are often surprising – but also according to whether the perpetrators were Italian or Germans.

## METACATEGORIES

**Scales:** National, Regional, City/Town

**Times:** September 1943 to February 1944

**Places:** Italy

**Experiences:**

- Victim's perspective: capture, arrest, internment, deportation; Movement (voluntary and involuntary) within Italy and from Italy to the camps of destination
- Perpetrator's perspective: arrest, internment, deportation; Movement (same as above); Political-administrative divisions (German- v. Italian-administered parts of Italy); Logic of deportations (who, when, why, etc.)

## AUTHORS

Alberto Giordano and Anna Hollan

[Geographies of the Holocaust: About the Authors](#)

### Museum Information

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- Research about Survivors and Victims
- Academic Programs

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- Teaching Materials
- Holocaust Encyclopedia

### Resources for Professionals and Student Leaders

- Leaders
- Military
- Law Enforcement
- Faith and Interfaith Communities

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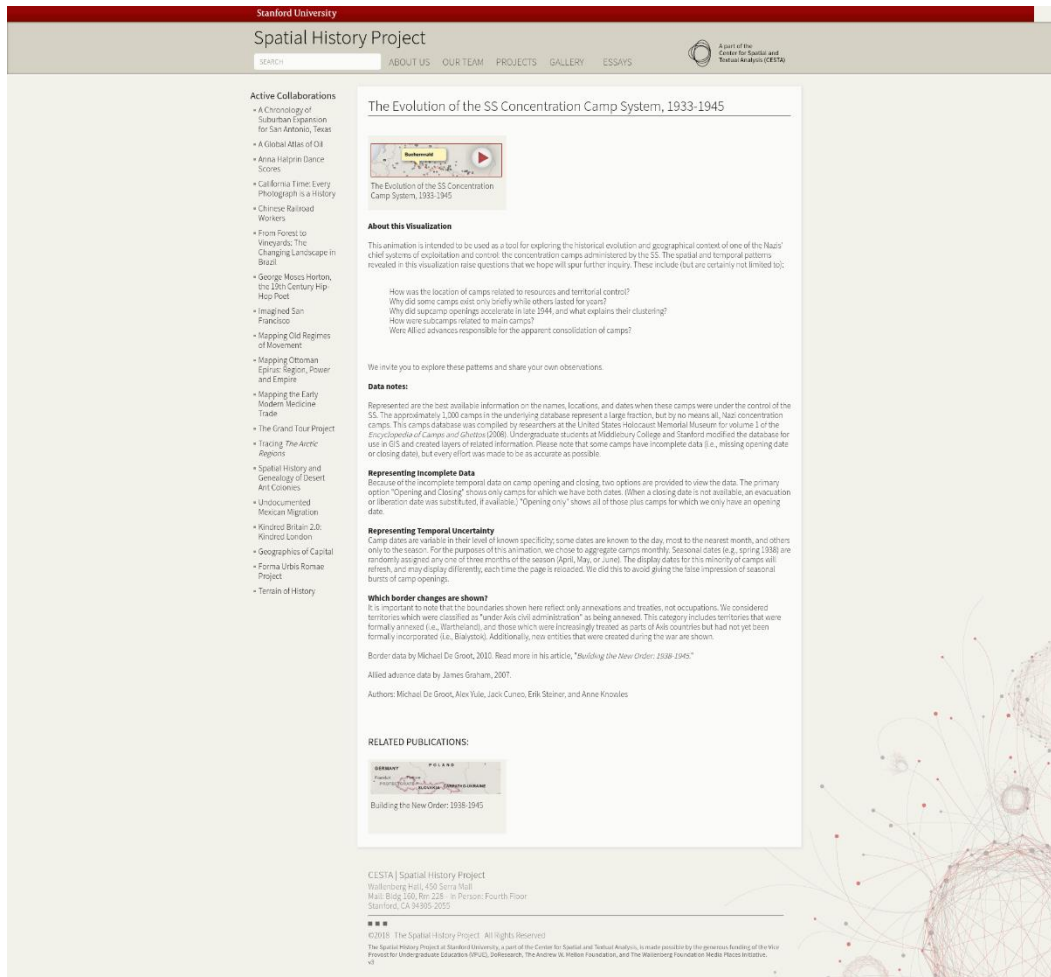
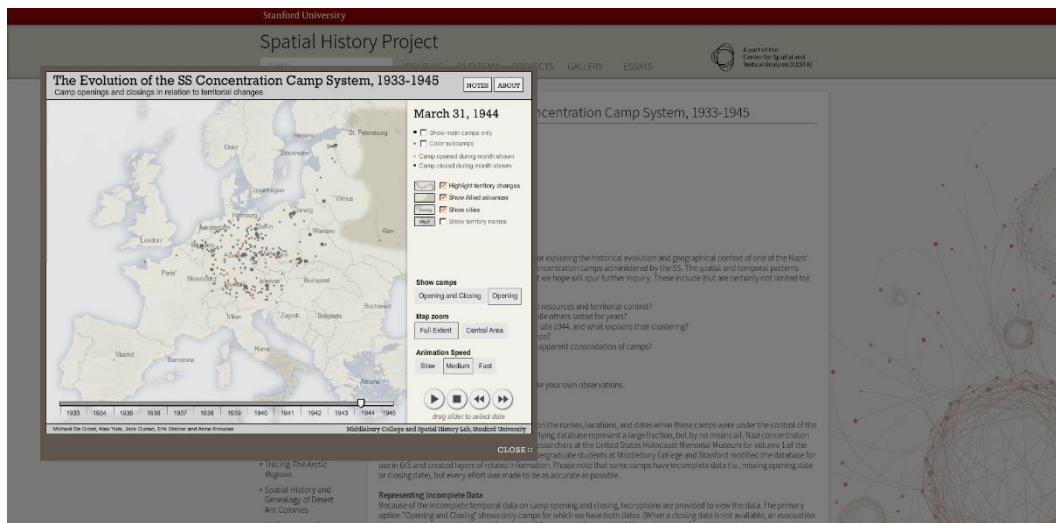
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Sample page from the Holocaust Geographies Collaborative's work on the website of the United States Holocaust Memorial Museum, <https://www.ushmm.org/learn/mapping-initiatives/geographies-of-the-holocaust/the-holocaust-in-italy/>.

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Sample pages from the Holocaust Geographies section of the Stanford Spatial History website, including map animation, <https://web.stanford.edu/group/spatialhistory/cgi-bin/site/viz.php?id=379>.